

MEMBERS NOTICE BOARD

Please use this Notice Board to benefit other members.



NOTICE

If any members have reel to reel or 8 track tapes that they wish to transcribe to compact cassettes, I can do so with out charge, except for the cost of any cassettes.

Contact:
John Atkin
Tel. 740036

FOR SALE

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17" AOC Monitor
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Contact:
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FOR SALE

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Special Price - £49
Contact - The Editor
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IWPCUG LIBRARY

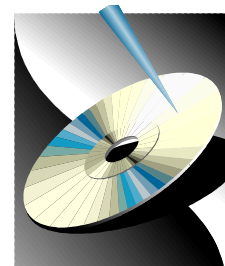
Recent Books added to the Library

PC Magazine Guide To Connectivity 2nd Edition by Frank J. Derfler, Jr.
Microsoft Windows Me Bible by Alan Simpson
Peter Norton's Complete Guide to Windows 98

Contact The Editor, if you wish to loan any of the above books - email: alleyne@clara.net

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The views and opinions expressed here are those of the contributors alone. No responsibility can be accepted with respect to advice or suggestions made in this journal.

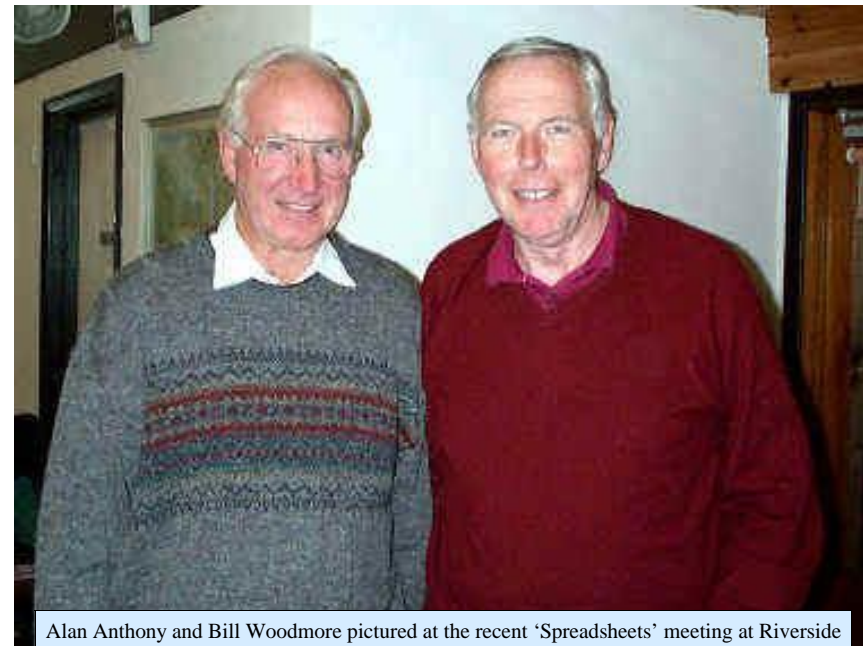


HOT KEY

ISLE OF WIGHT PC USER GROUP

MONTHLY JOURNAL

Issue 126 - May 2002



Alan Anthony and Bill Woodmore pictured at the recent 'Spreadsheets' meeting at Riverside

Denny Linzmaier gave a very good talk recently, on how a webcam works. He demonstrated the various instant messaging services, such as Yahoo Messenger, AOL Messenger and Net Meeting and showed how to set up Yahoo Instant Messaging Service. Denny then went on to explain how the Logitech Webcam works by linking up with Roger Brown who went online after a call from Roger Skidmore from his mobile phone. Roger Brown duly went online and the meeting could see him

quite clearly, as he has a broadband connection at home (This type of connection is better for videoconferencing). Denny then spoke to Roger who eventually could hear Denny after the sound was configured on the laptop at the meeting. Roger then could hear Denny and see the members at the meeting. After the interval, Denny explained how Net Meeting worked and showed our members how to send a video email using the Logitech software and then answered members questions. An informative talk that was appreciated by all.

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FUTURE MEETINGS

1st May	Computer Graphics for Beginners	Bob Groom
15th May	File Organisation for Beginners	Dennis Linzmaier
5th June	Internet Connectivity & related subjects	Jonathan Thornton
19th June	Some more on Linux Current Activities in the Computability Section of the Club	Bob Groom John (Buzz) Austin
3rd July	Information Structure	Ian Moth
17th July	Making and uploading your first web page	Mike Bayliss and David Broughton
7th August	To be announced	
21st August	Annual Barbecue (more details later)	

Suggestions for subjects and speakers are always welcome.
Is there a subject that particularly interests you?
Even if you don't know a speaker, the Committee may be able to find one.



Jonathan Thornton and David Hendy at "Instant Messaging" meeting at Riverside Centre



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Gregg Keizer, PCWORLD, May 2002



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CNET, March 2002

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www.adsubtract.com



Denny Linzmaier, The Editor and Clem Robertson at the Riverside Centre



PRIZE PUZZLE CORNER
MAY 2002
by David Broughton

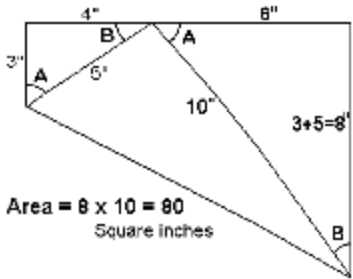


Three married couples attend a dinner party.

- 1. Adrian says "Barbara's husband is a liar."
- 2. John says "My wife always tells lies."
- 3. Angela says "Fred always tells lies."
- 4. Lucy says "My husband always tells the truth."
- 5. Angela says "Fred is married to Barbara."
- 6. Fred says "John and Angela always tell lies."
- 7. After listening to these statements, Barbara says "All lying husbands are married to lying wives and all truthful husbands are married to truthful wives."

Who is married to whom? Please send your answer to me at davidb67@clara.co.uk (see p3 for my postal address) to arrive by Wednesday 1st May 2002 to be entered into the prize draw.

Answer to the folded paper problem.



The above diagram shows that the area is easily deduced with some simple geometry. The key concepts are: the hypotenuse of the given triangle is 5" using Pythagoras; the larger triangle has the same angles as the smaller by observing that the right angular corner of the paper touches the top edge leaving two angles that sum to 90 degrees, and that the 3" and 5" sides of the smaller triangle form one of the edges of the rectangle to give the scaling factor of 2 for the larger triangle. The answer of 80 square inches was sent in by a record 13 members (though two were only approximately right due to rounding errors arising from the unnecessary use of trigonometric functions). Four answers were incorrect, ranging from 76 to 107.52. The following members got the correct answer: John Bownas, Roger Brown, Mike Bayliss, Jerry Tepper, Michael Hodge, Peter Greenhalgh, Rob Webb, Gwynn White, Peter Wreford (who won the draw and a £5 book token), Peter Woollerton (who excluded himself from the draw), Dorothy Woollerton, Terry Green and Ken Cameron.

A very good entry. For those who thought this problem was too easy, a more difficult folded paper problem can be found on my personal web page (www.davidb67.clara.net) under "Mathematical Puzzles".

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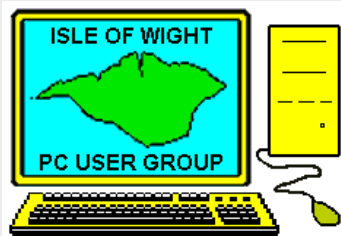


With the introduction from Intel of their 2.2GHz Pentium 4 processor and AMD likewise producing their Athlon XP 2000+ 1.67GHz processor, means that as processors get faster and faster, they are generating high temperatures (anything from 40 to 70 Celsius) and so a cooler is essential to stop them from burning out. All processor coolers use passive cooling in the form of a heatsink. A heatsink conducts heat away from the chip and is usually made from aluminium but the heatsink isn't sufficient in itself to cool a hot processor. Therefore the processor cooler uses active cooling in the shape of a fan to blow cool air through the heatsink and it is essential that an effective and slower, quieter fan be used to keep the PC noise down to a minimum. I personally have changed my processor fan recently to a CoolerMaster (www.coolermaster.com) Thunderbird 1.4GHz XP 1700+ as a future proofing for any upgrades that I may make in the foreseeable future. (See pages 8 and 9 for more information on PC Cooling).

It is pleasing to see that the cost of MP3 players is coming down and that the Diamond Rio 600 32Mb USB player can be purchased from Jungle Computers (www.jungle.com) for only £60. This player can capture and playback for up to 1 hour of digital quality music from the Internet. (For more on information on MP3 see page 6 and 7).

If anybody is desiring to purchase a laptop at knock down prices, Toshiba have a range of discontinued Libretto, Portege, Satellite and Tecra laptops and various add-on options available on their website (<http://computers2.toshiba.co.uk/discontinued>) or telephone **08704448944**. Also available on this website are discontinued digital cameras and projectors at special prices.

Finally, may I say what a pleasure it was to see the presentation on "Spreadsheets" by David Broughton, at our last meeting at the Riverside Centre. The projector used by David enabled those members present to see a vivid and perfectly clear picture on the screen. Thank you David.



The Isle of Wight PC User Group
welcomes all owners and users of
IBM Compatible Personal Computers.

It is a group which seeks to exchange ideas
and seek new information.
Our meetings are informal **on the first and
third Wednesdays of each month at The
Riverside Centre, Newport, 7.30 - 9.30 pm.**

The first Wednesday has usually a formal
talk whilst the third Wednesday is more
informal, geared to the new user and aims
to help out members with specific problems.

Membership is £12 per year.

Visitors are welcome.

This journal, "HOTKEY", is produced every
month.

If you would like to know more about us,
either come along to one of our meetings or
contact one of our Committee Members on
one of the numbers on page 3.

Club's Website - <http://www.iwpcug.org/>

Freeware

Kyle MacRae



Free for all – for now

With the online world in a constant state of flux, it's a sure-fire bet that some of these freebies will go by the wayside. After all, the only reason to offer someone a free lunch is the expectation that they'll come back as a paying guest for dinner, bed and breakfast. But as many an e-commerce enterprise is finding to its cost, the average savvy surfer is a wandering spirit with a distinct lack of loyalty. So indulge yourself now before the advertising revenue that makes all of this possible dries up. The going may never be this good again.

We've looked at the emergence of online applications as an alternative to shrink-wrapped software, but there's also a staggering assortment of completely free programs around. For example, check out CNET's Download site (www.download.com). Let's say you want a decent multimedia software player to listen to MP3 files and audio CDs on your PC. First, click on the relevant area of interest – in this case, MP3 & Audio. Next up, select Players from the New Options. Now you can choose from more than 100 downloadable programs. Click on any title to find out more about what it does. Note that there are different types of licence here, including shareware (try before you buy, but cough up eventually or stop using it) and demo (usually a time or feature-limited version). But at the bottom-left corner of the page, there's an option to filter the files, so select Free from the drop-down Licences menu and click Update. Now you'll see only the freebies. Finally, to see what's flavour of the month, click on the word Downloads at the top of the column. With a little rooting around, you can find programs that do near enough anything that would otherwise cost you a pretty penny down at the superstore. We would merely caution that freeware developers tend not to offer technical support, so download only what you really need and accept that you're doing so at your own risk.

Some other sites worth a visit are:

Tucows: www.tucows.com

Freeware Guide: www.freeware-guide.com

The Freeware Publishing Site:
www.katho.be/freeware/freeware.htm

Free-Programs.com: www.free-programs.com

Our thanks to Computer Active Magazine for this extract



CD Copying Basics

Copying to CDR or CDRW seems to be a bit of a black art for many, so this is what I've discovered. All CD copying software comes with two basic programmes, one is a sort of file manager which allows you to drag files from one Explorer type window to another ("pre-burning") window before you actually press the copy (or "burn") key, and the other completely unrelated software is the "packet CD" utility which allows you to treat your CD like a huge and slow floppy disk. Two separate programmes, bundled together to confuse.

COPY SOFTWARE - You mostly want to do straight diskcopy function or else copy a group of files across to a CDR - this is typically **EasyCD Creator** (now version 5) which is the easiest to use - I can use it. You get a very graphical set of buttons each of which brings up a different copy project. **NERO** is almost as easy but comes with a wizard anyway. With Nero you get a column of copy programmes on the left and a corresponding set of menu options on the right for each project. The file copying option is called CDROM (ISO1) just to confuse you. Academics and boffins use WinOnCD, but not me. With these three CD copy programmes you use CDR type disks. OK? This is a special copy utility (often called multisession because you can do it a number of times unless you "finalise" your disk)

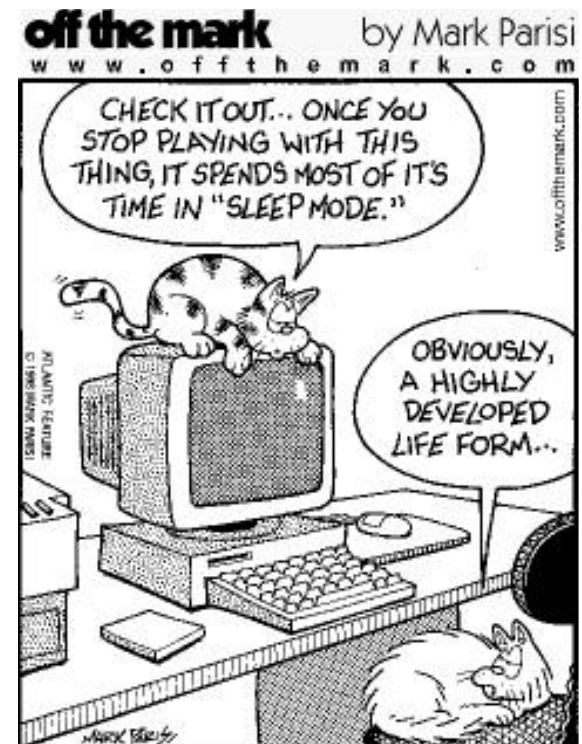
PACKET CD - I suppose the information is copied in packets, but the big thing here is that once installed (usually automatically) you don't use any special software. You just drag the files across with your own file manager. You do have to format your CDRW disk first though, using the special formatter programme - sorry. With CDRW you can copy and delete just like a floppy. So the CDR disks are for the special copy programme; CDRW disks for Packet drag and drop. Only just to confuse, you can packet format a CDR disk. When you delete in this mode you don't recover the space so your packet-formatted CDR tends to shrink as you use it.

Packet software and Copy software are separate - for a long time I used **Nero** copy software with WinOnCD's packet utility (I could never find the eject button with Nero's accompanying **INCD** packet utility).

Took me a long time to work this out. The other thing I have used is to drag audio files across to CDR. I used my sound card's recording software to record an LP, then the LP Ripper programme (PC Plus, June 2001) to split the tracks up (and omit the ones I don't like), and then drag the remaining ones to CDR. There are other things you can do with CDR which are far too complicated, but if you've got these basics you can work them out if you need to. Oh, and one other thing - old CD readers don't always read new home-grown CDs.

Roger Skidmore

HUMOUR





How does MP3 work?

MP3 is a way of storing music in a digital format. It is a compressed music format that removes sound within the song that is not necessarily heard by the listener. By extracting these background sounds, MP3 files compress the storage space needed to hold a song to less than a 10th of its original size.

To explain, we're going to have to get a little technical, so bear with us for a bit. Broadly speaking, there are two types of file compression – non-lossy and lossy. Non-lossy compression is used for files where everything they contain is important, such as the setup file for an application. If even the smallest part of such a file was missing, it would become corrupt. Non-lossy compression works by using repeating patterns in the file as the basis for making it smaller. Lossy compression is used for situations where what the file actually produces has tiny bits missing, and the missing parts are imperceptible. This makes it ideal for image, video and audio files, where information that can't be seen or heard can be safely discarded. MP3 uses a lossy compression technique called 'perceptual audio coding'. Perceptual audio coding works on the assumption that human beings can't actually hear everything in a piece of recorded music. For instance, there are some sounds in every song that you're not aware of, either because they're of a frequency that most people can't hear or because they're masked by more prominent sounds. For digital audio, these inaudible components can still make up a large part of the overall file, making it bigger than it really needs to be. MP3 compression works by searching an uncompressed digital audio file (typically one with a **WAV** extension) for exactly these kinds of inaudible sounds and when it finds them, they're discarded. This method is so successful that a 40Mb WAV file can be compressed to a 4Mb MP3 file, with very little audible drop in sound quality.

The compression can be improved yet further by reducing what's known as the **bit** rate. Most MP3 compression programs allow the bit rate to be altered – it's part of the MP3 standard – and this is where it gets even more technical. The bit rate refers to how many bits (that's 'bits' as in 'eight of them make a byte') are used to store each second of digital audio. The more bits per second, the better the sound quality and a bit rate of 128Kbps gives CD-quality. The bit rate also affects how much a track is compressed and 128Kbps gives a 12 to 1 compression ratio (12Mb compresses to around 1Mb, in other words). Reducing the bit rate increases the compression ratio still further but sound quality begins to suffer. A bit rate of 64kbps gives FM radio-quality sound and a 24 to 1 compression ratio. Switching from stereo to mono also improves compression.

The table below gives a more complete breakdown of the figures.

<u>Sound quality</u>	<u>Mode</u>	<u>Bit rate</u>	<u>Compression ratio</u>
Telephone	Mono	8Kbps	96:1
Telephone	Stereo	64Kbps	24:1
Near-CD	Stereo	96Kbps	16:1
CD	Stereo	128Kbps	12:1



E-mail Discussion Groups in the Club by David Broughton

At the time of writing (mid April 02) we have 40 members subscribing to the Yahoo e-group "iwpcusers". This is less than half the membership. The other half are missing out on technical queries and information about the club organisation and meetings. It costs nothing to join in. Just send an e-mail to

iwpcusers-subscribe@yahoogroups.com

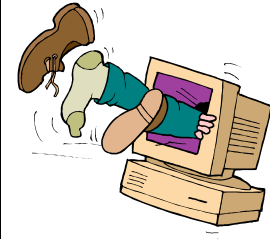
You will receive, in return, an e-mail asking you to confirm. Reply to this and you will then be signed up (if you are a current member of the club). If you are worried about the number and quantity of e-mails you will receive, I can assure you there are not usually more than a few each day and they are all brief because attachments and HTML-type e-mails are not allowed. Also, if you are running Outlook Express or Outlook, you can direct your incoming e-mails from this group to a special dedicated folder so that they do not get mixed up with other e-mails. To do this, refer to my article on page 6 of the March edition of Hot Key.

Another discussion group more specifically aimed at members interested in webpage creation is "IWPCUG-Web-group". If you would like to join this, send an e-mail, in the same, way to:

IWPCUG-Web-group-subscribe@yahoogroups.com

Most subscribers to this group are also subscribers to the main group. This is an old e-group that has now been resurrected from cyberspace after we discovered that Rob Webb was the owner and I was one of the moderators.

If you want more information about these groups, send me an e-mail, to:
davidb67@clara.co.uk.



COMPUTER QUIP

Each decade brings a 300-fold increase in the complexity available to the computer.

At this rate, computers will exceed the complexity of the human brain between AD 2010 and 2020.

Sadly, whatever we do to advance our powers, we can also do for robots... and they are likely to be faster thinkers than we are.

Perhaps they will be kind enough to keep us as pets.

Clive Sinclair, Chairman of the British Branch of MENSA

Backing Up the Windows Address Book

by David Broughton

A lot of grief is occasionally expressed after one has done some major operation on one's computer (like re-installing Windows!) to discover that one has lost all the e-mail addresses and other contacts from the Windows Address Book. We tend to forget that this file is one of the important ones to backup from time to time so here is the method.

This procedure is for Outlook Express users:

Start up Outlook Express. Click on Tools. Then "Address Book...". Now, in the Address Book window, click on File and dwell on "Export..." and you will see three options. Choose "Address Book (WAB)...". This will take you to a window with the title "Select Address Book File to Export to". Here you can navigate to wherever you want to store a copy, typically a floppy disk, and give a suitable file name. The file type will be WAB, but you don't type that.

To restore it, of course, you would choose "Import..." instead of "Export...", otherwise the procedure is similar.

It may not be appreciated that the Address Book used by Outlook Express is the same file that other Windows applications use. The file usually has a name equal to the registered owner of the computer (taken from the registry) with the file type WAB and you can find it in the folder "C:\WINDOWS\Application Data\Microsoft\Address Book" where you can save it using other techniques such as drag and drop. There is also a backup version present in that folder with the file type "wa~" that will be used by Outlook Express if the main file is corrupted or missing.

Recommended Web Sites



Modem Help - www.modemhelp.com (FAQ's and Tutorials)



Top 100 Downloads - www.simtel.com



Info on all operating systems - www.knowledgehound.com/topics/Oss.htm



File Forum - www.fileforum.com



The File Extension Source - <http://filext.com/>



How To Make An MP3 File

To make your own MP3 tracks from music on a CD, you will need to extract (or rip) the digital data from the disc and then convert (or encode) it into the MP3 format. Most personal MP3 players will come with software to do this. If you don't have a personal player, then MP3 creation tools can be obtained in the form of MusicMatch Jukebox. Have a look at www.mp3machine.com where you will find a wealth of MP3 creation utilities to suit all operating systems and specific requirements.

What can MP3 do for you?

Once you've squashed all your favourite music down to tiny audio files or downloaded a vast collection of MP3s, what do you do with them? The quality falls short of audiophile hi-fi requirements but there are, in fact, a number of ways that you can get mileage out of a PC-based MP3 collection.

For starters, you could invest in a personal MP3 player. These increasingly popular devices allow you to take a selection of your favourite tunes with you wherever you go, rather like a Sony Walkman. However, personal MP3 players have no motorised parts to go wrong, so chewed up tapes and skipping CDs become a thing of the past. There is available Creative Lab's DAP Jukebox which uses a built-in hard disk for storage instead of solid-state memory or Likko's new ID3 Superstar MP3 CD player which adds ID3 tag-reading capability to its MP3 CD player. Hard disks are much more economical and mean you can begin to deal in gigabytes of memory rather than megabytes. The Jukebox itself, for example, can hold the equivalent of 150 albums of music.

If you don't want to invest in a personal MP3 player, there are alternatives. Why not use the hard disk as an enormous MP3 jukebox? All you need is some MP3 player software, such as Windows Media Player, for example or better, WinAmp (www.winamp.com).



If your system is equipped with a CD-writer, then you could create your own MP3 CDs and **listen to them in your car** or on your stereo, instead of on your computer. Using MusicMatch Jukebox, you can convert your music files to WAV and then export them to record to CD, whereupon you will be able to play the CD on a normal CD player or on your computer's CD player. A 650Mb CD can hold around 10 albums of MP3s but you will only be able to play it back on a PC or one of the very rare MP3-capable audio CD players.

It is also possible to record MP3s to MiniDisc. If you have a MiniDisc recorder - portable or otherwise - you can easily plug your PC's sound card into it. Ideally, you'll need a sound card and MiniDisc recorder with optical S/PDIF connections but using the more common analogue connection (which every sound card has) shouldn't cause anything more than a small drop-off in sound quality. All you need to do is drag and drop the tunes into WinAmp and hit record on your MiniDisc machine.

Our thanks to Computer Active Magazine for this article

Processor Cooling for Peace and Performance!

As you increase the speed of your processor you increase the amount of heat generated. More heat equals less stability and greater risk of burning out your processor.



Now you can have excellent cooling performance but at the same time virtually no noise! The radial fin cooler product shown above employs advanced fin designs which give a vastly superior surface area to that offered by traditional extrusion-based products. Different versions are available to suit a variety of processors, and because of their unique design, the coolers are not only incredibly efficient at removing heat but are also very easy to install.

See:- <http://www.quietpc.com>

PC Cooling and Power

by Herbert Wong, Jr.

Heat is the biggest enemy of electronic components. Without a complete strategy for dispersing and venting this excess energy (heat), a literal component meltdown can occur in seconds. It is in your best interest to prevent this from happening in the computer you own or build.

The flow of an electric current through a resistance will produce heat. This is true whether you are looking at a single transistor in a circuit or a complex integrated circuit (a dense collection of, commonly, millions of transistors). Increases in current, voltage, resistance, and frequency can cause heat to increase.

A properly designed component disperses heat through conduction (transfer of kinetic energy from one molecule to another). The component's mounting and case spread the heat away from a tiny area. In a small but important way, this will help prevent the excessive heat disaster that we try to avoid. If the component continues to produce heat and it builds up, bad things can happen. Melting or even fire can result.

A few years ago, Intel designed a microprocessor that had a particular layout that placed frequently used transistors too close together. After extensive testing, the design was declared unsatisfactory. Commonly executed code repeatedly used the same transistors, which resulted in a heat buildup. Unfortunately, that version was already shipping and those units had to be replaced by a similar circuit with a different layout without the hot spots.

Where does the heat go? The greatest cooling occurs by convection. Heat, transferred to a moving liquid or gas, moves away from the component. So far, so good. However, in a closed system, the heat has nowhere to go and the liquid or gas can become excessively hot.

For a computer, the processor wastes electricity in the form of heat. The chip conducts heat to a heat sink and fan forces air through the heat sink. The air takes the heat away from the heat sink by convection. The warm air is now forced out of the computer case by a fan.



A computer power supply is rated at between two hundred and four hundred watts of electricity. The energy consumed is mostly transformed to heat and released into the case. Now you can see why proper cooling is so critical.

Hot air rises. The strategy for cooling a computer case should be to let heat rise. However, it is not that simple. Some geniuses decided that the ATX computer power supply should blow cool external air through the power supply into the computer case. The now warm air is forced over the microprocessor. Ultimately, the hot air escapes through any perforations in the case. Since power supplies are always at the top of the case, this means that the hot air must be forced down through the case.

Most cases allow the installation of a small fan in the front at the base. This fan should blow air into the case when the power supply is configured to blow air out of the case. This combination will establish the best airflow.

The average computer case is full of wide, flat, and grey ribbon cables. Floppy disk drive, hard disk drive, CD/DVD drive, and SCSI (small computer system interface) drive cables are commonly used. In addition, power supply, audio, and video cables run throughout the case. This awful mess of cables is like a mixture of spaghetti and lasagne leftovers. All of these cables interfere with each other and block the crucial airflow.

References

Check out the usual sites:

<http://www.theoverclockingstore.co.uk> - massive selection of fans
<http://www.dansdata.com/>
<http://www.sysopt.com/>
<http://www.heatsink-guide.com/>
<http://www.tomshardware.com/>

Conclusion

Everyone must recognize that newer high-powered systems require particular attention to adequate system cooling. A little common sense and advanced planning are all that needs to be done. One last thought on this. Dust acts as a thermal insulator. Clean the dust off the surfaces of the filters, fan blades, case holes, cards, microprocessors, heat sinks, memory, hard disk drives, etc. While you're at it, clean the dust off of your refrigerator coils, too!

Our thanks to Herbert Wong Jr. for these extracts

